

State Water Board Update to Independent Science Board: Historical and Current Efforts to Establish Flow Objectives with a focus on the San Joaquin River Flow Objectives and South Delta Salinity Objectives

January 13, 2012

History

- 1960s: State Water Rights Board Decisions, State Water Resources Control Board, Porter-Cologne
- 1971: Decision 1379 – Interim water quality standards to be met by Delta export projects
- 1978: Delta Plan and Decision 1485 – Updated water quality standards for the Delta and established water right requirements
- 1991: Bay-Delta Plan – Never implemented
- 1992: Draft Decision 1630 – Not adopted
- 1995: Bay-Delta Plan – Basis for current Bay-Delta Plan objectives
- 2000: Decision 1641 – Implements 1995 Bay-Delta Plan
- 2006: Bay-Delta Plan – Updates 1995 Bay-Delta Plan identifies emerging issues

Context

- Water Boards' Bay-Delta Strategic Workplan
- Delta Reform Act of 2009
- Delta Stewardship Council's Delta Plan
- Bay Delta Conservation Plan

Current State Water Board Efforts

- Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem, prepared pursuant to the Sacramento-San Joaquin Delta Reform Act of 2009
- San Joaquin River flows and Southern Delta water quality Bay-Delta Plan Update
- Update balance of Bay-Delta Plan per 2009 review of the 2006 Bay-Delta Plan
- Water rights implementation
- Delta tributaries flow setting and implementation
- Clean Water Act section 401 water quality certifications
 - Merced River (New Exchequer)
 - Tuolumne River (New Don Pedro)

Processes and Tools Used

- Public process
- Review and synthesis of scientific reports and information
- Scientific peer review
- Computer models
- Economic analysis

Products to date

- Periodic Review of the Bay-Delta Plan (2009)
- Delta Flow Criteria Report (2010)
- Salt Tolerance of Crops in the Southern Sacramento-San Joaquin Delta (2010)
- Technical Report for Alternative San Joaquin River Flow and Southern Delta Salinity Objectives Report (2011)

Conclusions

- Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem:
 - Flow and physical habitat interact in many ways, but they are not interchangeable. The best available science suggests that current flows are insufficient to protect public trust resources.
 - Inflows should generally be provided from tributaries to the Delta watershed in proportion to their contribution to unimpaired flow unless otherwise indicated.
 - A strong science program and a flexible management regime are critical to improving flow criteria.
- Technical Report for Alternative San Joaquin River Flow and Southern Delta Salinity Objectives:
 - Importance of the flow regime - (Poff et al. (1997) describes the flow regime as the "master variable" that regulates the ecological integrity of rivers)
 - Fish Communities
 - Food Web
 - Aquatic Habitat
 - Geomorphic Processes
 - Temperature
 - Water Quality
 - Given the dynamic and variable environment to which SJR basin fish and wildlife adapted, and imperfect human understanding of these factors, developing precise flow objectives that will provide certainty with regard to protection of fish and wildlife beneficial uses is likely not possible. Nevertheless, the weight of the scientific evidence indicates that a higher and more variable flow regime in salmon-bearing SJR tributaries to the Delta during the spring period (February through June) is needed to protect fish and wildlife beneficial uses.
 - While using unimpaired flows may not indicate precise, or optimum, flow requirements for fish under current conditions, it would, however, provide the general seasonality, magnitude, and duration of flows important for native species (Fleenor et al., 2010 and Lund et al., 2010)
 - The State Water Board will incorporate appropriate measures for adaptive management in any new SJR flow objective in order to respond to new information and changing circumstances.
 - Current level of salinity in surface waters of the southern Delta appear suitable for all crops

Next Steps and Schedule

- San Joaquin River flows and southern Delta water quality
 - Release technical appendices for Substitute Environmental Document (SED) January 2012
 - Release draft SED and Bay-Delta Plan amendments March 2012
 - Board meeting to consider adoption of Bay-Delta Plan amendments and final SED September 2012
- Remainder of Bay-Delta Plan objectives
 - Notice of Preparation January 2012
 - Release draft SED and Bay-Delta Plan amendments January 2013
 - Board meeting to consider adoption of Bay-Delta Plan amendments and final SED July 2013
- Water rights implementation of Bay-Delta Plan amendments
 - To be determined
- Delta tributaries flow setting and implementation
 - Complete work for priority tributaries by June 2018
- Water quality certifications
 - Merced license expiration: February 28, 2014
 - Tuolumne license expiration: April 30, 2016